



United States
Department of
Agriculture

Forest
Service

Southwestern
Region

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File Code: 3420

Date: April 27, 2001

Randy Balice
Forest Ecologist
Los Alamos National Laboratory Ecology Group
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Los Alamos, NM 87545

Dear Mr. Balice:

This summary documents the results of the field trip you, New Mexico Zone Forest Health Pathologist Dave Conklin, and I conducted on Monday, April 16, 2001. The purpose of this field trip was to examine several areas burned by the Cerro Grande fire that were exhibiting signs of insect activity. Areas examined included three sites along Pipeline Road (Santa Fe National Forest), Back Gate (Los Alamos National Laboratory) and American Springs at Apache Springs Trail, (Bandelier National Monument). All of the areas consisted of dead or heavily scorched ponderosa pine, white pine, Douglas-fir, white fir, and subalpine fir. Others of your group accompanying us on the field trip are listed on the attached participant list.

Pipeline Road

The three sites examined along Pipeline Road (Santa Fe National Forest) northwest of Los Alamos, NM, were located at elevations of 8,130 feet, 8,460 feet, and 8,510 feet. Elevations were determined using a Garmin GPS III Plus. Signs of woodpecker activity (small to large portions of bark peeled away from the tree) were observed at all three sites. An examination of the wood peckered trees revealed they were infested with wood borer larvae belonging to the families Cerambycidae (roundheaded wood borers) and Buprestidae (flatheaded wood borers). Wood borers become especially numerous after fires. Young larvae feed on the wood beneath the bark, creating tunnels filled with frass and wood chips. In late summer they tunnel deeper into the wood and overwinter. Generally, the life cycle is completed in two years. For more information on these wood borers, please refer to page 31 in the enclosed brochure, "Conifer Pests in New Mexico".

Although there were no current signs of *Ips* or *Dendroctonus* (family Scolytidae) bark beetle activity (sawdust in the cracks and crevices of the bark, fresh pitch tubes, etc.), several fire-killed ponderosa pines at the first site examined (elevation 8,130 feet) did have quite a few small, old pitch tubes. However, when sections of the bark were removed to check for signs of bark beetle activity, no egg galleries were found, indicating the trees were either unsuitable for colonization or they pitched out the invading bark beetles. As Dave indicated, attacking bark beetles produce fine red sawdust when boring into the bark of the tree, and damage by woodborers results in coarse white sawdust they leave just beneath the bark as they bore into the wood. Enclosed are four publications on *Ips* beetles that discuss their life cycle, evidence of infestation, prevention and control.



Back Gate

At the Back Gate area (Los Alamos National Laboratory), located at the White Rock/Jemez junction (State Highway 501), three heavily scorched, live ponderosa pines had recently been attacked by the western pine beetle, *Dendroctonus brevicomis*. These bark beetles normally breed in and kill scattered, over-mature, slow-growing, decadent or diseased trees and trees weakened by stand stagnation, lightning, fire, or mechanical injury. These bark beetle-infested trees were on the first ridge north of the back gate. Seven fire-killed trees with old pitch tubes were also found at this site. However, our examination revealed they were unsuccessfully attacked. Once your incinerator is up and running, the western bark beetle infested trees would certainly rank as high priority candidate trees to be cut and incinerated. Removing bark beetle-infested trees from the site before the larvae complete development would reduce the potential for additional mortality in nearby living trees.

American Springs at Apache Spring Trail

At American Springs (Bandelier National Monument), we found several fire-killed ponderosa unsuccessfully attacked by bark beetles and numerous signs of wood borer activity. There were no signs of current bark beetle activity at this site.

If you or your staff have any questions concerning this report, please give me a call at (505) 842-3287.

Sincerely,

/s/ Terrence J. Rogers
TERRENCE J. ROGERS
Director, Forestry and Forest
Health, New Mexico Zone

Enclosures (7)

- Field Trip Participants
- Forest Insect & Disease Leaflet #1, Western Pine Beetle (10)
- Forest Insect & Disease Leaflet # 122, Pine Engraver, *Ips pini* (Say), in the Western United States (10)
- Engraver Beetles in Southwestern Pines (10)
- Fact Sheet: Ips Bark Beetles (10)
- Integrated Pest Management Guide: Arizona Five-Spined Ips, *Ips lecontei* Swaine, and Pine Engraver, *Ips pini* (Say), in Ponderosa Pine (10)
- Conifer Pests in New Mexico (10)

cc:

Jerome Jenkins, BAER Team Coordinator

Forest Supervisor, Santa Fe NF

Superintendent, Bandelier National Monument

tmalecek (Santa Fe National Forest SO)

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Enclosure 1

Field Trip Participants

- Patrick J. Valerio, Ecologist/Wildlife Specialist
- Kevin Buckley, Graduate Student, Hydrology
- Jeff Waltershed, Cerro Grande Recovery/Fuel Mitigation
- Leslie Hanson, ESH-20 Biological Management
- Sam Laftin, Ecologist